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FILE COVERS 1907 - 30 Nov 2004  VOL 141 ISS 23
FILE LAST UPDATED: 29 Nov 2004  (20041129/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

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L22             STR
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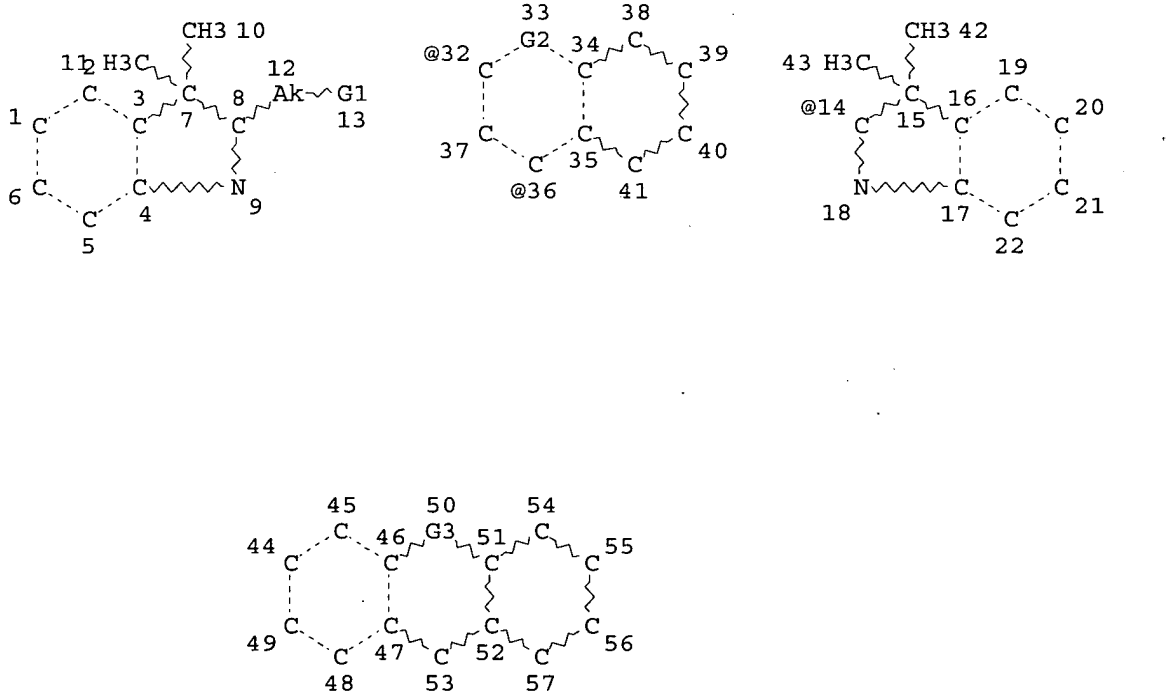


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L24 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L23

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L24 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:292145 HCAPLUS
DOCUMENT NUMBER: 140:300070
TITLE: Fluorescent labeling reagents with multiple donors and acceptors
INVENTOR(S): Kumar, Shiv; Chen, Chung-yuan
PATENT ASSIGNEE(S): Amersham Biosciences Corp, USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004029579	A2	20040408	WO 2003-US30361	20030925
WO 2004029579	A3	20040819		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-413517P P 20020925

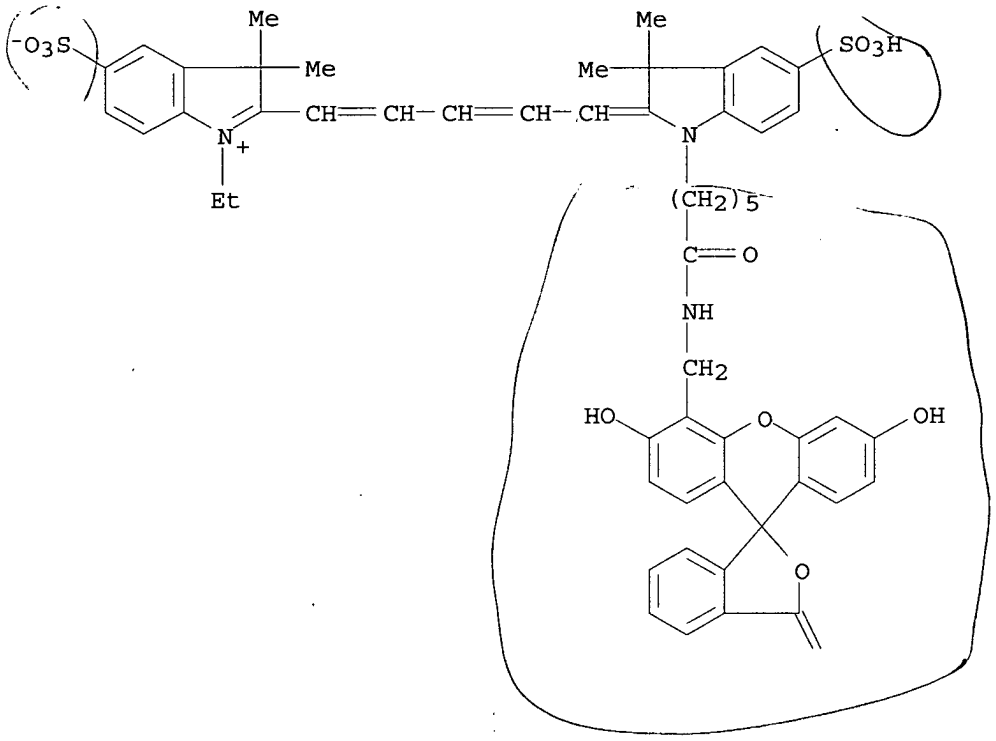
AB Disclosed is a novel class of fluorescent resonance energy transfer (FRET) labeling reagents, based on and synthesized from easily prepared dye building blocks. The labeling reagents are in the form of 'cassettes' which enable their attachment to a wide variety of biol. and other materials. A labeling reagent comprises at least two fluorescent dye moieties covalently linked via a linker group and optionally having a target bonding group for attaching the reagent to a target. The energy transfer labeling reagents may be bound to target materials through covalent or non-covalent attachment. The dyes are selected so that the emission spectrum of a first (or donor) dye overlaps the absorption spectrum of a second dye, thereby allowing energy transfer to occur between the dyes. The dye building blocks are 4', 5'-bis-aminomethyl-fluorescein and/or its 5(6)-carboxylic acid and having the structure (I). In addition to the embodiment of the invention which includes a single donor and a single acceptor fluorochrome, the fluorescent energy transfer labeling reagents according to the invention may further comprise one or more third fluorochromes each having third absorption and emission spectra

covalently attached to said first or second fluorochromes.

IT **676625-59-5P 676625-60-8P**
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
(fluorescent labeling reagents with multiple donors and acceptors)

RN 676625-59-5 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl)methyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A

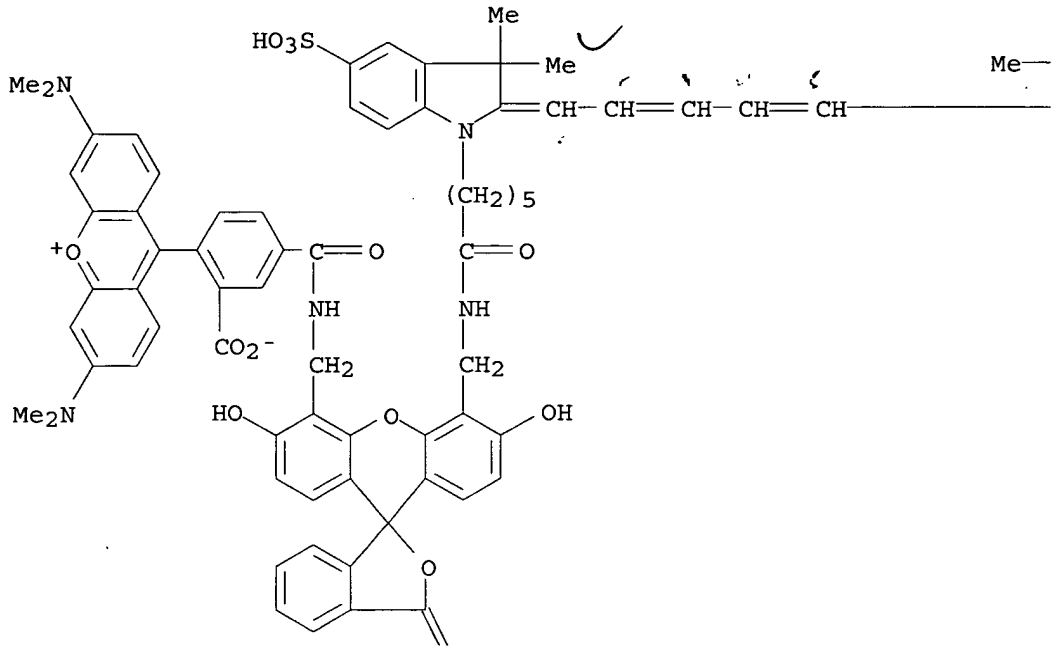


FETL

PAGE 2-A

RN 676625-60-8 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[[[5'-[[[4-[3,6-bis(dimethylamino)xanthylium-9-yl]-3-carboxybenzoyl]amino]methyl]-3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl]methyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, bis(inner salt) (9CI) (CA INDEX NAME)

PAGE 1-A



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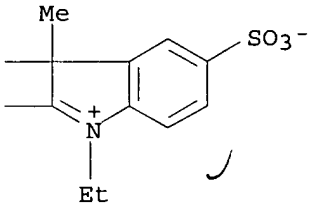


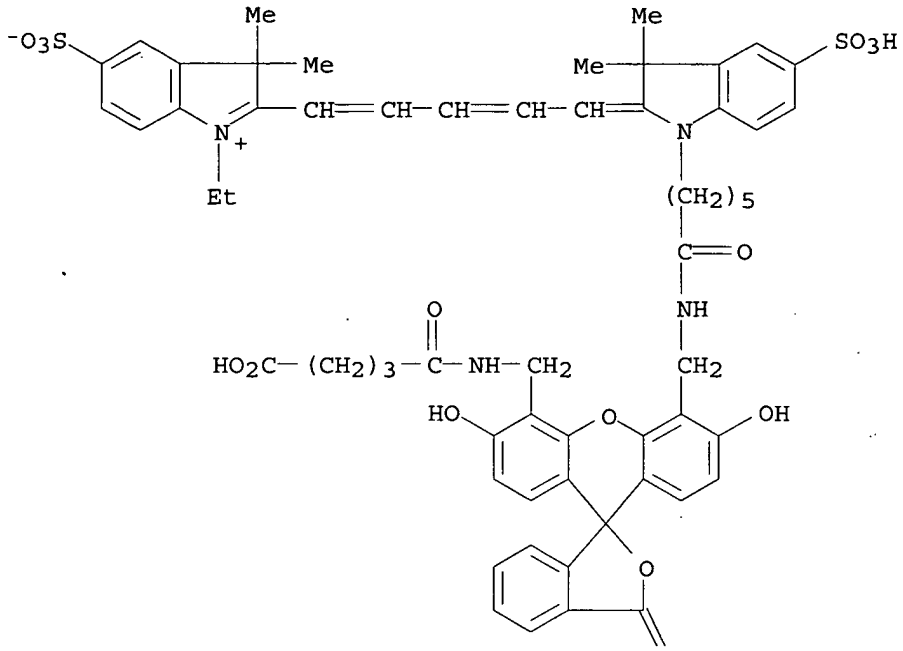
PAGE 2-A

IT **676625-66-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorescent labeling reagents with multiple donors and acceptors)

RN 676625-66-4 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[[[5'-[[(4-carboxy-1-oxobutyl)amino]methyl]-3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl]methyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

L24 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2004:292144 HCAPLUS
DOCUMENT NUMBER: 140:317655
TITLE: Energy transfer dyes, terminators, and use thereof
INVENTOR(S): Kumar, Shiv; Chen, Chung-yuan; Rao, Sudhakar
PATENT ASSIGNEE(S): Amersham Biosciences Corp, USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004029578	A2	20040408	WO 2003-US30360	20030925
WO 2004029578	A3	20040708		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-413517P P 20020925

OTHER SOURCE(S): MARPAT 140:317655

AB The present invention relates to a set of four fluorescently labeled dye terminators with improved brightness. Two of them are single-dye-labeled terminators, and the other two dye terminators are based on fluorescent resonance energy transfer (FRET). The FRET dye terminators are generated from the 4',5'-bis-aminomethylfluorescein. Of the two amino groups of the donor dye, 4',5'-bis-aminomethylfluorescein, one amino group is used to attach the acceptor dye, and the other amino group is used to attach the dideoxynucleoside-5'-triphosphate. These terminators are useful as labels in DNA sequencing reactions. A typical single-dye-labeled terminator was manufactured by adding 35 mg 5-carboxyfluorescein-NHS to 5 mL solution 11ddGTP (0.1 M NaHCO/Na2CO3, pH 8.5) in ice/water bath, and stirring the mixture 16 h a room temperature

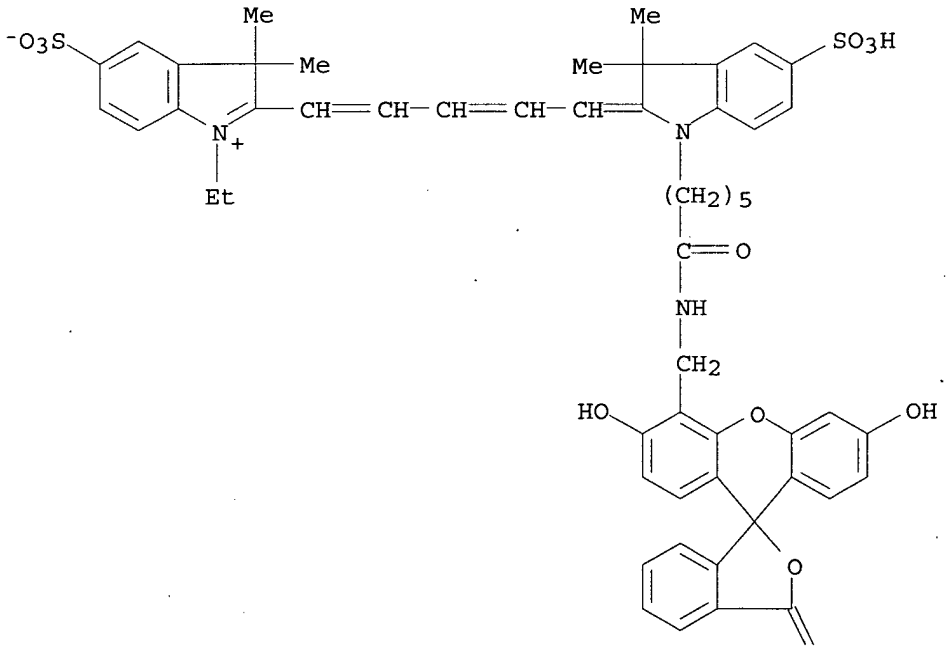
IT **676625-59-5P**

RL: IMF (Industrial manufacture); PREP (Preparation)
(dye label; fluorescently labeled dye terminators with improved brightness for DNA sequencing reactions)

RN 676625-59-5 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl)methyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

L24 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:43460 HCAPLUS
DOCUMENT NUMBER: 132:109363
TITLE: Colorants having rotaxane structure, labeling agents and method for their use
INVENTOR(S): Suzuki, Tomomi; Noda, Hitoshi; Okazaki, Shigetoshi
PATENT ASSIGNEE(S): Bunshi Bio Photonics Kenkyusho K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000017183	A2	20000118	JP 1999-116397	19990423
JP 3078793	B2	20000821		
US 6242430	B1	20010605	US 1999-301635	19990429
PRIORITY APPLN. INFO.:			JP 1998-121255 A	19980430
OTHER SOURCE(S):	MARPAT 132:109363			

AB The colorants with good water solubility, useful for biomol. labeling, consist of a cyclodextrin ring threaded by a linear mol. chain which can bear colorants of the same or different type on 2 ends, e.g., fluorescent pigments. Thus, mixing 100 μL a saturated solution of α-cyclodextrin in DMSO with 3 mg 1,12-diaminododecane and 25 mg 5-carboxytetramethylrhodamine succinimidyl ester dissolved in 50 μL DMF at 40° for overnight gave a rotaxane compound

IT **255382-25-3P 255382-28-6P**
RL: ARG (Analytical reagent use); IMF (Industrial manufacture); ANST (Analytical study); PREP (Preparation); USES (Uses)
(colorants having rotaxane structure, labeling agents and method for use)

RN 255382-25-3 HCAPLUS
CN α-Cyclodextrin, rotaxane compd. with 2-[5-[1-[6-[[12-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]dodecyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-3H-indolium inner salt (1:1) (9CI) (CA INDEX NAME)

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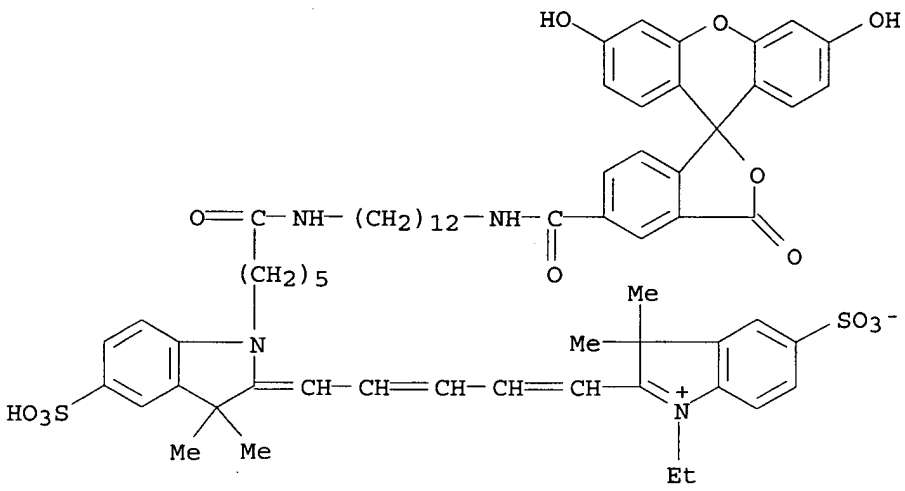
CRN 255382-24-2
CMF C66 H76 N4 O13 S2



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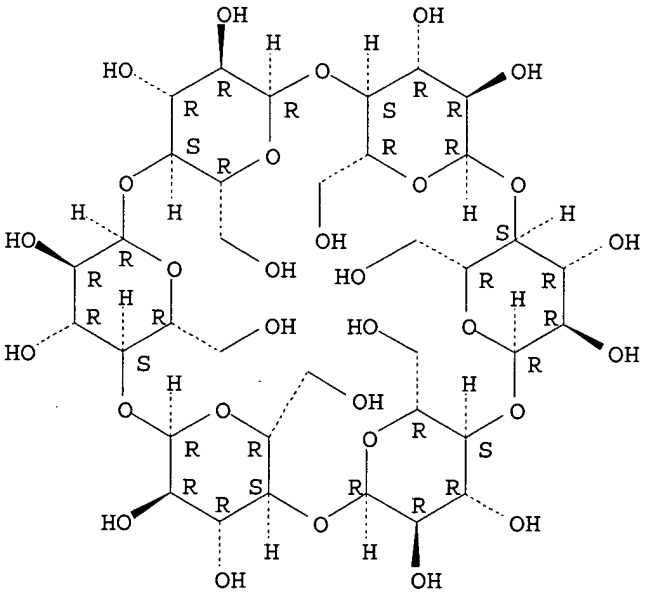
CRN 10016-20-3
CMF C36 H60 O30

Absolute stereochemistry.



RN 255382-28-6 HCAPLUS
CN α-Cyclodextrin, 6A-[(4-carboxy-1-oxobutyl)amino]-6A-deoxy-, rotaxane compd. with 2-[5-[1-[6-[[12-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]dodecyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-3H-indolium inner salt (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 255382-27-5
CMF C41 H67 N O32

Absolute stereochemistry.

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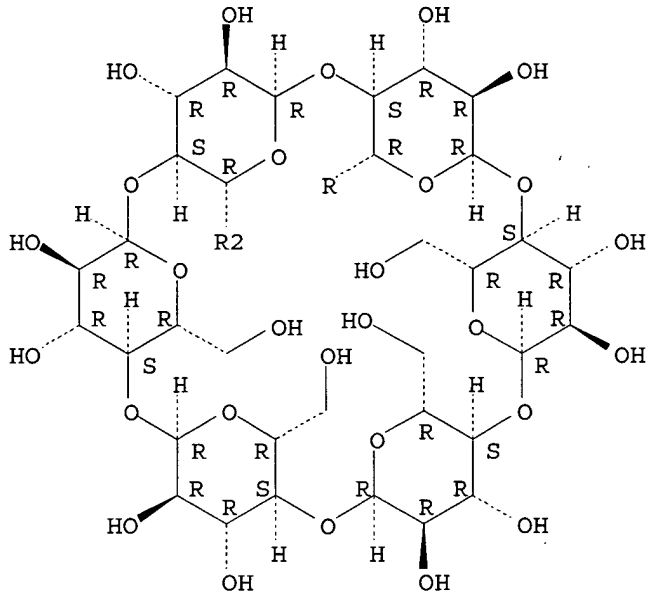

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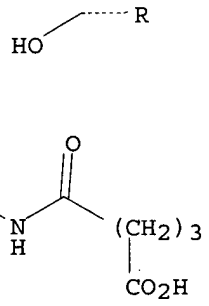

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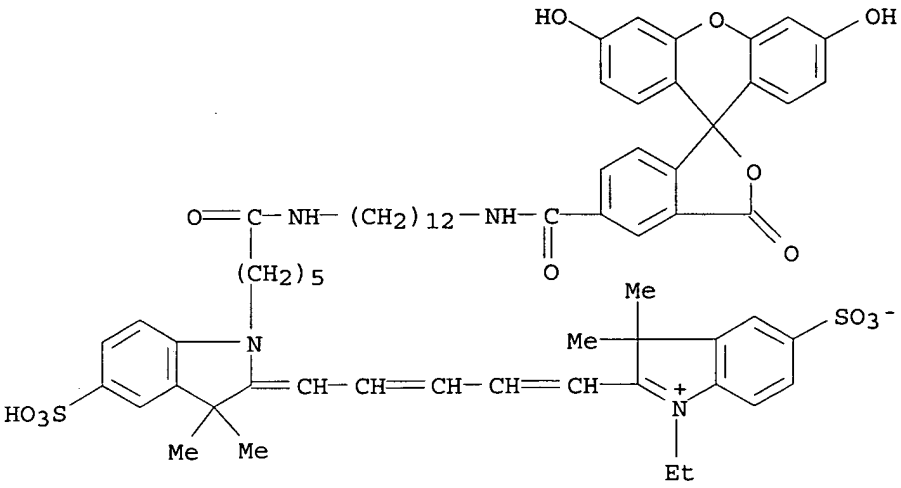
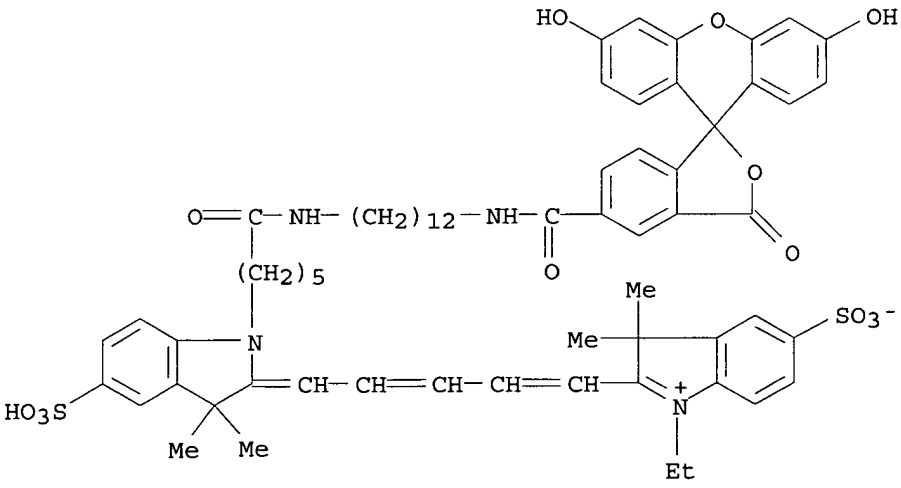


IT **255382-24-2P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; colorants having rotaxane structure, labeling agents and method for use)
RN 255382-24-2 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[[12-[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)carbonyl]amino]dodecyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



L24 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:561610 HCAPLUS
DOCUMENT NUMBER: 131:166214
TITLE: Energy transfer dyes with enhanced fluorescence, reagents containing them, and their use in nucleic acid sequencing
INVENTOR(S): Lee, Linda G.; Spurgeon, Sandra L.; Rosenblum, Barnett
PATENT ASSIGNEE(S): Perkin-Elmer Corporation, USA

SOURCE: U.S., 77 pp., Cont.-in-part of U.S. 5,863,727.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5945526	A	19990831	US 1998-46203	19980323
US 5863727	A	19990126	US 1996-642330	19960503
US 5847162	A	19981208	US 1996-672196	19960627
JP 2003221515	A2	20030808	JP 2002-280013	19970521
US 6335440	B1	20020101	US 1999-272097	19990318
US 2002086985	A1	20020704	US 2001-14743	20011029
JP 2004305217	A2	20041104	JP 2004-152623	20040521

PRIORITY APPLN. INFO.:

US 1996-642330	A2	19960503
US 1996-672196	A2	19960627
US 1996-726462	A1	19961004
JP 1998-502974	A3	19970521
JP 2002-280013	A3	19970521
US 1998-46203	A1	19980323
US 1999-272097	A1	19990318

OTHER SOURCE(S): MARPAT 131:166214

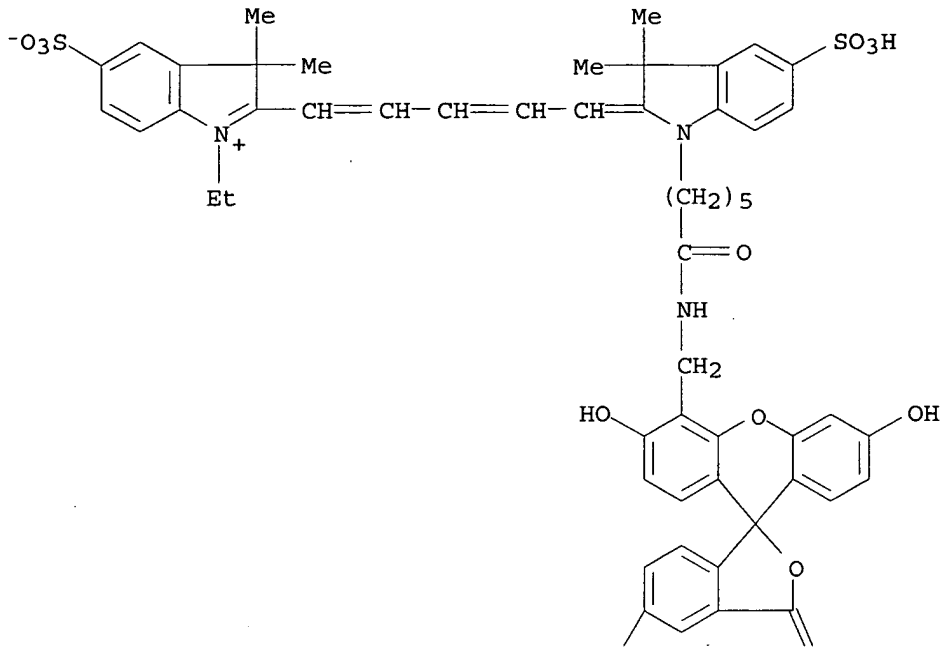
AB Novel linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye are provided. These linkers facilitate the efficient transfer of energy between a donor and acceptor dye in an energy transfer dye. One of these linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye has the general structure R21ZCOR2R3 (R1=C1-5 alkyl attached to the donor dye; Z=NH, S, O; R2=alkene, diene, alkyne, 5-6-membered ring having at least one unsatd. bond or a fused ring structure which is attached to the carbonyl carbon; R3=functional group which attaches the linker to the acceptor dye). A preferred linker is CH2NHCOC6H4CH2NHCO. Thus, 9-(2,4-dicarboxyphenyl)-3,6-bis(dimethylamino)xanthylium was esterified (4-CO2H) with N-hydroxysuccinimide (I), condensed with 4-H2NCH2C6H4CO2H, re-esterified with I, and condensed with 4'-(aminomethyl)-5-carboxyfluorescein to give an energy transfer dye (II), esterification of which with I provided a site for coupling to a nucleoside. In DNA sequencing, an oligonucleotide labeled with II was brighter than one labeled with the direct amide of the resp. carboxyrhodamine and (aminomethyl)fluorescein not containing a spacer bridge.

IT **212389-91-8P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(energy transfer dyes with enhanced fluorescence, reagents containing them, and their use in nucleic acid sequencing)

RN 212389-91-8 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[[(5-carboxy-3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl)methyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:708965 HCAPLUS
DOCUMENT NUMBER: 129:335785
TITLE: Acid-labile and enzymically cleavable dye conjugates for diagnosis with near-IR radiation and for therapy
INVENTOR(S): Licha, Kai; Riefke, Bjoern; Semmler, Wolfhard; Wrasidlo, Wolfgang
PATENT ASSIGNEE(S): Institut fuer Diagnostikforschung G.m.b.H. an der Freien Universitaet Berlin, Germany
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847538	A2	19981029	WO 1998-DE1001	19980402
WO 9847538	A3	19990121		

W: AU, CA, CN, HU, JP, KR, NO, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

DE 19717904	A1	19981029	DE 1997-19717904	19970423
AU 9879057	A1	19981113	AU 1998-79057	19980402
AU 733757	B2	20010524		
EP 988060	A2	20000329	EP 1998-929212	19980402
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001521530	T2	20011106	JP 1998-544715	19980402
NO 9905181	A	19991022	NO 1999-5181	19991022
US 6534041	B1	20030318	US 2000-403418	20000501

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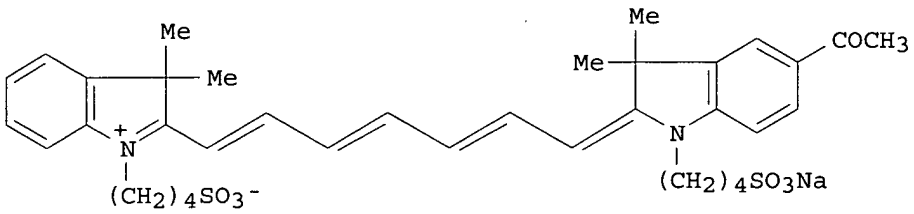

I

AB Dyes which fluoresce in the near-IR spectral region are provided, the fluorescence of which is quenched by coupling via a cleavable linker to aromatic compds. (e.g. dyes, drugs), antibodies, antibody fragments, or other proteins. Cleavage of such a construct in vivo at a target site (e.g. a tumor or focus of inflammation) leads to an increase in near-IR fluorescence, which can be detected even at deep sites owing to the high transparency of tissues to near-IR radiation. Suitable dyes include tetrapyrrole, tetraazapyrrole, xanthine, phenoxazine, phenothiazine, and especially polymethine dyes such as cyanine dyes. Drug-dye conjugates in which the therapeutic activity of the drug is masked by coupling to the dye may serve as prodrugs which, after administration, are cleaved at a target site to release the active agent, as well as the fluorescent dye which may act as photosensitizer, at the site. The linker may be acid labile, i.e. cleavable at the low pH characteristic of tumors and sites of bacterial inflammation, or cleavable by enzymes which occur in diseased tissues, e.g. bacterial enzymes. Thus, a cyanine dye, 5-(1-oxoethyl)-1,1'-(4-sulfobutyl)indotricarbocyanine Na salt (I) was prepared by reaction of 4-hydrazinophenyl Me ketone with 3-methyl-2-butanone followed by 1,4-butanesultone to form 5-(1-oxoethyl)-1-(4-sulfobutyl)-2,3,3-trimethyl-3H-indolenine and further reaction of this compound with glutaconaldehyde dianil-HCl. Reaction of I with 4-carboxyphenylsulfonylhydrazine followed by N-hydroxysuccinimide and DCCD produced an acid-labile N-hydroxysuccinimidyl ester, which was coupled to anti-melanoma monoclonal antibody 9.2.27; the antibody conjugate had a fluorescence quantum yield of 0.1%.

IT **215114-76-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(acid-labile and enzymically cleavable dye conjugates for diagnosis with near-IR radiation and for therapy)

RN 215114-76-4 HCAPLUS

CN 3H-Indolium, 5-[[[[4-[[[1-[(2S,4S)-4-[(3-amino-2,3,6-trideoxy-α-L-lyxo-hexopyranosyl)oxy]-1,2,3,4,6,11-hexahydro-2,5,12-trihydroxy-7-methoxy-2-naphthacenyl]-2-hydroxyethylidene]hydrazino]carbonyl]phenyl]methyl]amino]carbonyl]-2-[7-[1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1,3,5-heptatrienyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt, monosodium salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry unknown.

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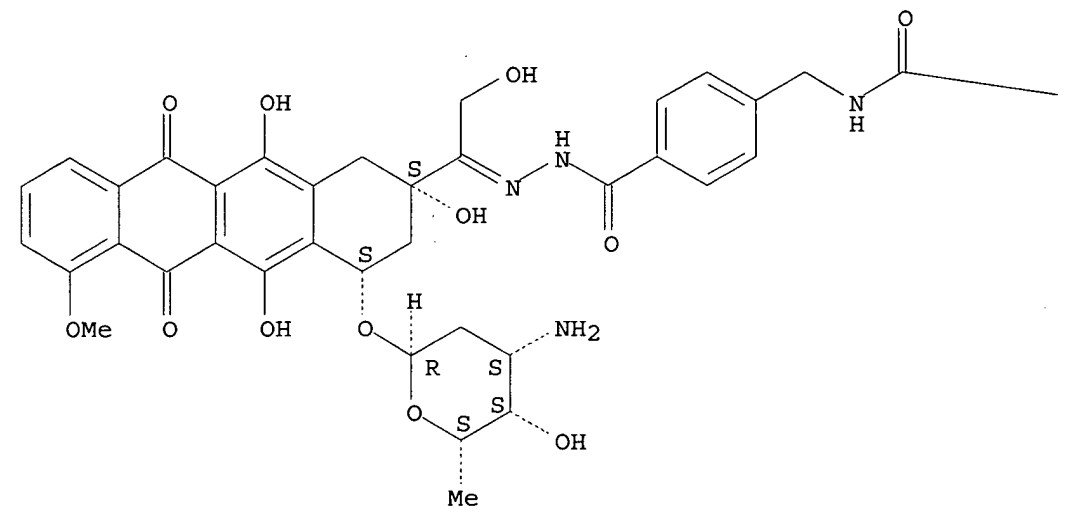
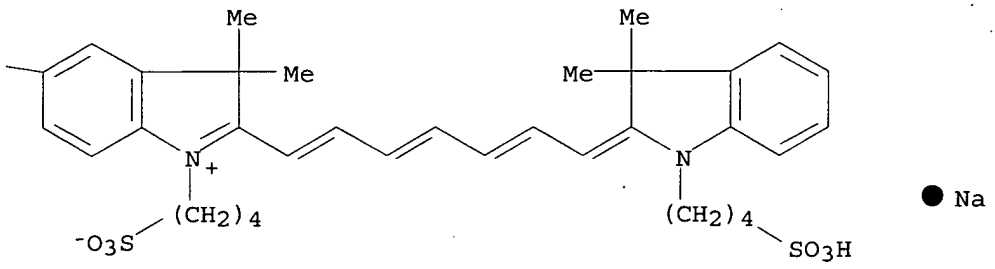


PAGE 1-B



L24 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:599359 HCAPLUS
DOCUMENT NUMBER: 129:212480
TITLE: Energy transfer dyes with enhanced fluorescence
INVENTOR(S): Lee, Linda G.; Spurgeon, Sandra L.; Rosenblum, Barnett
PATENT ASSIGNEE(S): The Perkin Elmer Corp., USA
SOURCE: U.S., 83 pp., Cont.-in-part of U. S. Ser. No. 642,330.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5800996	A	19980901	US 1996-726462	19961004
US 5863727	A	19990126	US 1996-642330	19960503
US 5847162	A	19981208	US 1996-672196	19960627
CA 2203494	AA	19971103	CA 1997-2203494	19970423
CA 2203494	C	20001226		
EP 805190	A2	19971105	EP 1997-303039	19970502
EP 805190	A3	19980107		
EP 805190	B1	19991215		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 9719995	A1	19971120	AU 1997-19995	19970502
AU 691143	B2	19980507		
EP 940450	A1	19990908	EP 1999-201120	19970502
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 187752	E	20000115	AT 1997-303039	19970502
JP 10088124	A2	19980407	JP 1997-115920	19970506
JP 3090626	B2	20000925		
JP 2000154381	A2	20000606	JP 2000-10931	19970506
JP 2000187036	A2	20000704	JP 2000-10932	19970506
JP 2003274999	A2	20030930	JP 2003-28821	19970506
JP 3499238	B2	20040223		
JP 2003221515	A2	20030808	JP 2002-280013	19970521
US 6335440	B1	20020101	US 1999-272097	19990318
JP 2000154332	A2	20000606	JP 2000-10933	20000119
JP 3592173	B2	20041124		
US 2002086985	A1	20020704	US 2001-14743	20011029
JP 2004043819	A2	20040212	JP 2003-288285	20030806
JP 2004068023	A2	20040304	JP 2003-288286	20030806
JP 2004250713	A2	20040909	JP 2004-136932	20040430
JP 2004305217	A2	20041104	JP 2004-152623	20040521

PRIORITY APPLN. INFO.:

US 1996-642330	A2	19960503
US 1996-672196	A2	19960627
US 1996-726462	A	19961004
EP 1997-303039	A3	19970502
JP 1997-115920	A3	19970506
JP 2000-10931	A3	19970506
JP 2000-10932	A3	19970506
JP 2003-288285	A3	19970506
JP 1998-502974	A3	19970521
JP 2002-280013	A3	19970521
US 1998-46203	A1	19980323
US 1999-272097	A1	19990318

OTHER SOURCE(S): MARPAT 129:212480
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Novel linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye are provided. These linkers facilitate the efficient transfer of energy between a donor and acceptor dye in an energy transfer dye. One of these linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye has the general structure

R21Z1C(O)R22R28 where R21 is a C1-5 alkyl attached to the donor dye, C(O) is a carbonyl group, Z1 is either NH, S or O, R22 is a substituent which includes an alkene, diene, alkyne, a five and six membered ring having at least one unsatd. bond or a fused ring structure which is attached to the carbonyl carbon, and R28 includes a functional group which attaches the linker to the acceptor dye. One example dye prepared was I.

IT **212389-91-8P**

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(energy transfer dyes with enhanced fluorescence)

RN 212389-91-8 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[[(5-carboxy-3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-4'-yl)methyl]amino]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

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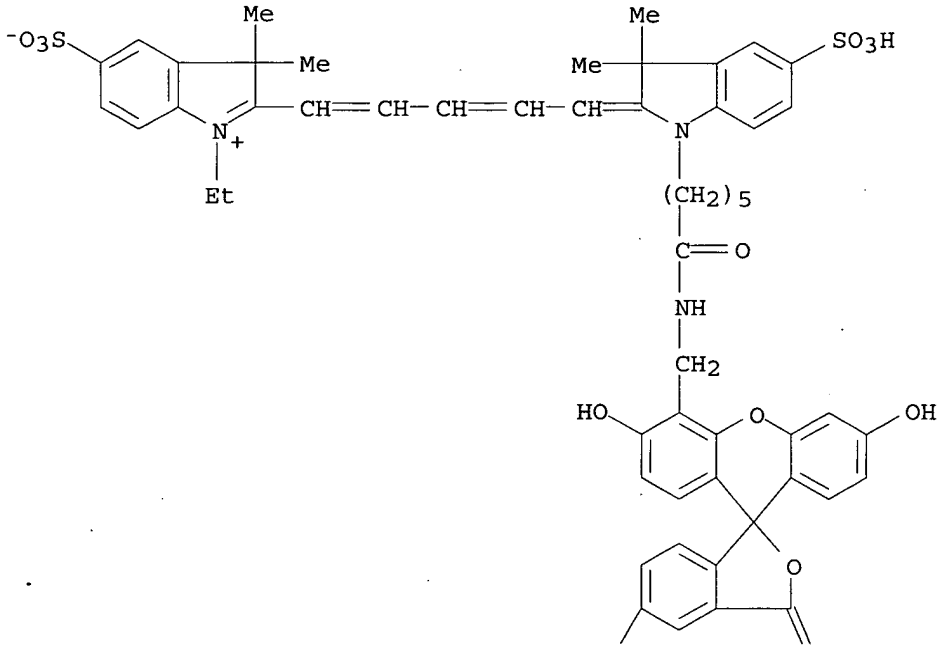

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REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:85099 HCAPLUS
DOCUMENT NUMBER: 126:86792

TITLE: Fluorescent labeling complexes with large stokes shifts formed by coupling together cyanine and other fluorochromes capable of resonance energy transfer
INVENTOR(S): Waggoner, Alan Stewart; Mujumdar, Swati Ratnakar; Mujumdar, Ratnakar Balvant
PATENT ASSIGNEE(S): Carnegie-Mellon University, USA
SOURCE: Eur. Pat. Appl., 29 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 747700	A2	19961211	EP 1996-303879	19960530
EP 747700	A3	19970507		
EP 747700	B1	20011205		
R: AT, BE, CH, DE, ES, FI, FR, GB, IT, LI, NL, SE				
US 6008373	A	19991228	US 1995-476880	19950607
GB 2301833	A1	19961218	GB 1996-11453	19960530
GB 2301833	B2	19970716		
EP 943918	A1	19990922	EP 1999-110086	19960530
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE, FI				
AT 210292	E	20011215	AT 1996-303879	19960530
ES 2170204	T3	20020801	ES 1996-303879	19960530
CA 2178308	AA	19961208	CA 1996-2178308	19960605
JP 09104825	A2	19970422	JP 1996-146333	19960607
JP 2843296	B2	19990106		
US 6130094	A	20001010	US 1998-152009	19980911
US 6479303	B1	20021112	US 1998-151899	19980911
US 6545164	B1	20030408	US 1999-413998	19991007
US 2003220502	A1	20031127	US 2002-300459	20021120
US 6673943	B2	20040106		

PRIORITY APPLN. INFO.:		
US 1995-476880	A	19950607
EP 1996-303879	A3	19960530
US 1999-413998	A3	19991007

AB The present invention provides low-mol.-weight fluorescent labeling complexes with large wavelength shifts between absorption of one dye in the complex and emission from another dye in the complex. These complexes can be used, for example, for multiparameter fluorescence cell anal. using a single excitation wavelength. The low mol. weight of the complex permits materials labeled with the complex to penetrate cell structures for use as probes. The labeling complexes are synthesized by covalently attaching through linkers to form donor-acceptor complexes. Resonance energy transfer from an excited donor to fluorescent acceptor provides wavelength shifts up to 300 nm. The fluorescent labeling complexes preferably contain reactive groups for the labeling of functional groups on target compds., such as derivatized oxy and deoxy polynucleic acids, antibodies, enzymes, lipids, carbohydrates, proteins, and other materials. The complexes may contain functional groups permitting covalent reaction with materials containing reactive groups.

IT **185397-56-2DP**, reactions products **185397-56-2P**
RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(fluorescent labeling complexes with large Stokes shifts preparation for cell anal.)

RN 185397-56-2 HCAPLUS
CN 3H-Indolium, 5-(aminomethyl)-2-[3-[5-[[[[[3-carboxy-4-(6-hydroxy-3-oxo-3H-xanthen-9-yl)phenyl]amino]thioxomethyl]amino]methyl]-1,3-dihydro-3,3-

dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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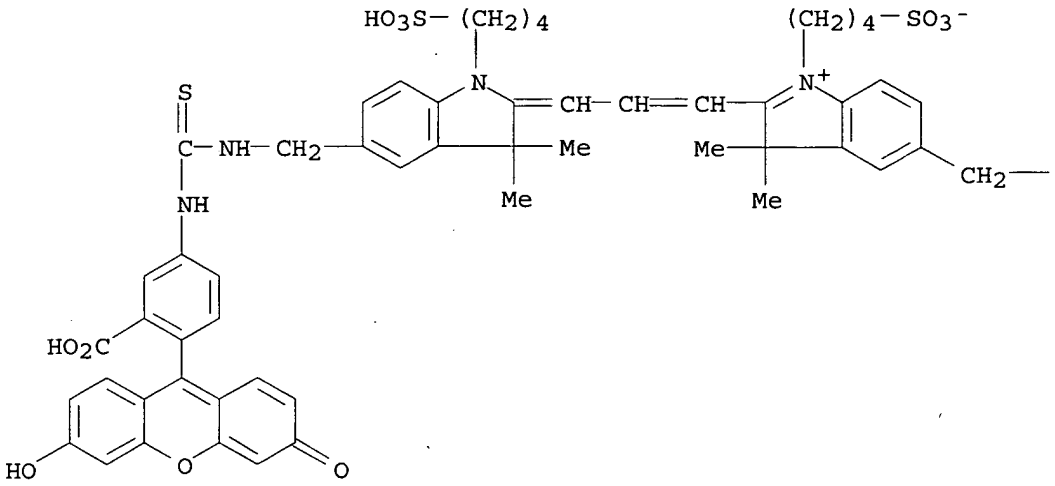

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— NH_2

RN 185397-56-2 HCAPLUS
CN 3H-Indolium, 5-(aminomethyl)-2-[3-[5-[[[[[3-carboxy-4-(6-hydroxy-3-oxo-3H-xanthen-9-yl)phenyl]amino]thioxomethyl]amino]methyl]-1,3-dihydro-3,3-dimethyl-1-(4-sulfobutyl)-2H-indol-2-ylidene]-1-propenyl]-3,3-dimethyl-1-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

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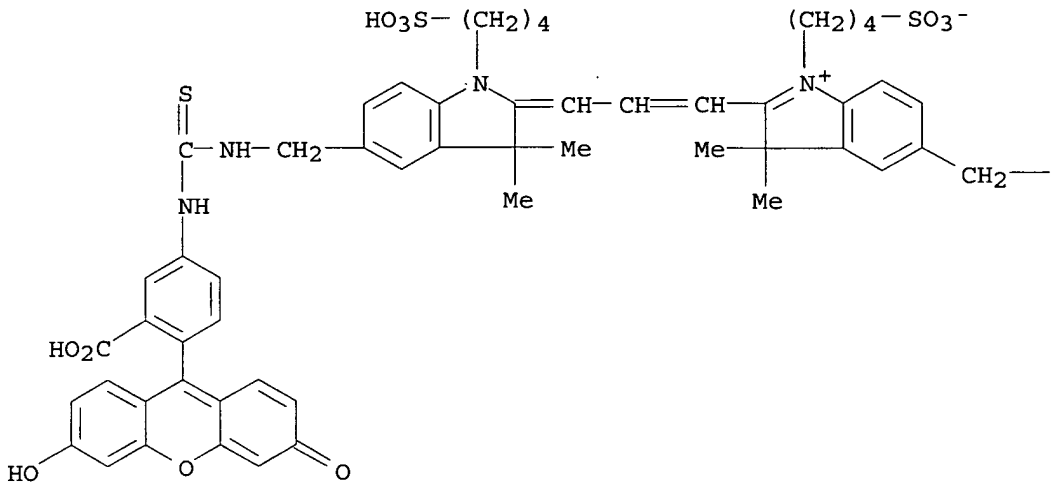

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